JAEWONCNC

User's Manual

IROAD IONE-3300CH

Read user's manual carefully in order to protect the user's safety and ensure the accurate use of it.

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Product Warranty

Please read and be fully aware the manual before using for right use and safety for the user.
The product and the manual may change and upgrade for convenience of the user.
Please refer to the official website.
www.navinc.co.kr

Warranty and Limitation of Liability

The manufacturer is not responsible for any accident caused by violating the manual.

- Manufacturer is not responsible for any break-down, loss of data, and any other damage while using the product
- The purpose of this product is to record the situation of accident and damage, but it is not capable to record all situation
- Accidents including battery discharge, and fire caused by inferior attach and unofficial remodeling.

Caution

Please use only prescribed power source.
(It may cause any defect and danger of fire.)

* Please do not disassemble and remodel the product without professionals.
  It may cause break-down and electric shock and in case of A/S service, it will berecorded as user's fault.
  (If needed, please call the service center for A/S service.)

* In case of attaching other devices, please have a care to avoid any defect on power source. (It may cause danger of fire and shock.)

* Frequent connection with power source may cause malfunctioning, so please avoid frequent connection.
  (the manufacturer is not responsible for any danger of fire and battery discharge caused by frequent connection.)

2 Caution

SD Card

Make sure that the power cable should be plugged off and LED should be turned off before you insert or remove the SD memory card in order to check the saved data in the SD card.

- Do not disassemble the SD card by force it can cause the damage to the product.
- Do not disconnect the SD card while the product activates. It can cause data corruption and damage of the SD card.
- Be advised to keep the SD card in the card case when you keep or move it, otherwise data can be corrupted by static electricity or external power voltage.
  (Do not use the product at the place under a high-temperature, humidity and the possible corrosion)
- It is highly recommended to store the important data in HDD, CD or another external storage device.
- It is highly recommended to check the recorded data at least once a week and format the SD card once a month.
- The SD card is expendable item which is highly recommended to have regular check and back-up, life-time can be shorten by long time use and it causes the product malfunction and being unable to save any more video files in the SD card.
  (If the SD card is to be inserted to the product after it is formatted, the folders will be automatically created and records and saves videos)

How to remove the SD card

Dabonda Gallery will be shut down by switching off the ignition or disconnecting the power cable from the product.

Make sure to follow the following order below when you insert or remove the SD card.

▶ SD card remove

1. Switch off the ignition
2. Make sure that the LED is turned off
3. Remove the SD card if the LED is completely turned off
   (Removing the SD card by force can cause damage of the product. The SD card will come out by a light press)

▶ Despite disconnecting power supply from Dabonda gallery, the product can record videos for 5 to 10 minutes.

▶ Insert the SD card

1. Insert the SD card into the slot on the main unit.
2. Switch on the ignition when the main unit is connected by cigarette power cable.

▶ Insert or remove the SD card when the power cable is disconnected.

How to use

Please make sure to follow guidelines below otherwise it can cause damage of the SD card or fires.

- Register your product at JAEWONCNC Homepage(www.navinc.co.kr) so as to have a fast A/S.
- Be advised to format a new SD card on PC for the first use.
- Being able to record Video for 5-10 minutes after the power supply cable is plugged off.
- Make sure to prevent IROAD IONE-3300CH from malfunctioning by staying under the shelter to escape direct light as the internal temperature of vehicle can jump up in summer season.
- Do not try to control the product while driving. Please make sure to control the product in safe environments.
- Do not touch the SD card or the product with oily or wet hands
- Do not insert impurities into the SD card slot on the product.
- Do not use water or volatile chemicals when you clean the product but use the soft and dry cloth.
- If the product is physically damaged or disconnected to power supply, the product cannot video-record and save data at all.
- Do not use dark tinting films on the vehicle window and remove impurities otherwise, it can disturb video-recording and result in degrade recording quality.
- Check video recordings to ensure that the camera angle is properly adjusted when you change location of the product.
- Contact your sales representative or A/S center immediately if there is any product malfunctions.
- Do not give the product violent force, otherwise it can cause damage of the product.
- Even though the product operates normal at the point of installation, the change of location can cause the product malfunction. Fix the product firmly on the spot and do not give it violent force to change the location of product.
- Do not use other SD cards rather than those are recognized authentic or recommended SD cards. The use of other SD cards can cause the product malfunction or the SD card malfunction.
- Do not disconnect SD card from the product or turn off the product or switch off the vehicle during firmware upgrade otherwise it can cause the SD card malfunction or a serious loss of data.
- Motion detection function can possibly cause the product malfunction by the different environments, weather and climate changes.

4 Product Features

IROAD IONE-3300CH is a Driving Recorder to be installed in the vehicle and record video and audio from front and rear in the vehicle. Consequently IONE-3300CH can possibly prove the evident video and audio of vehicle accident, damage, or physical conlicts between driver and passenger in the commercial vehicle. Fundamentally it induces the safe driving.

Real High-definition

- Front : Real HD 1280X720
- Rear : High quality video 640X480
- View Angle front : 110 ° , Rear : 120 °

External GPS

- It is possible to check the recorded GPS data in the exclusive PC viewer by connecting the external GPS to Dabonda Gallery.

▶ Optional Accessory

Motion Detection

- The Parking mode is changed into the Motion Detection mode in 10 minutes if no movement is detected by the G-sensor. Recorded video files are saved into the Parking Folder.
- Recording 10 seconds before motion detection and 20 seconds after motion detection
- This function can be operated using the Constant Power Supply.

3 Dimensional Sensor (G)

- Built-in 3G-Sensor can detect and record impact, acceleration, and deceleration (3 Axis-X,Y,Z)

Constant Recording and Event Recording

- Constant Recording: Every 60 seconds recording
- Event Recording : save video recording files in the Event Folder when it detects the impact.

Event Button

- It is possible to record and save video and audio immediately using the Event button.

Audio Recording

- It is possible to playback video and audio as audio is recorded synchronized with video.

Firmware Update

- It is possible to upgrade the performance of the product by updating firmware in the SD card.

▶ For more information, visit www.hdblackbox.com

Parking-Mode function

- It can be efficient to save a large number of video files in a small memory space of SD card
- This function can be supported only using the Constant Power Supply.
- It is necessary to select the Parking-Mode if the user needs this mode.

Micro SD/ Format Function Support

- It is possible to playback video files in Smart phone, PMP, or other devices compatible with SD memory card.
- The saved video files are overwritten from the oldest video files.
- Built-in format function; in order to store the recorded data safely into the Micro SD card anytime and anywhere.
- Press the Event button about 5 seconds in order to format the Micro SD card.

Exclusive PC viewer

- It is possible to check video files, accident information and the recorded GPS data in the exclusive PC Viewer.

Backup battery / Voice announcement

- In case, power supply is disconnected, the last records can be safely stored as back-up power is supplyed.
- It is possible to check the condition of device by the Voice Announcement.

6 Component

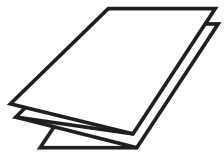
Box component

Main Unit and Mount Cradle

Rear Camera

Micro SD Card

Cigarette Power Cable
(12V ~ 24V)



Manual

Optional accessories

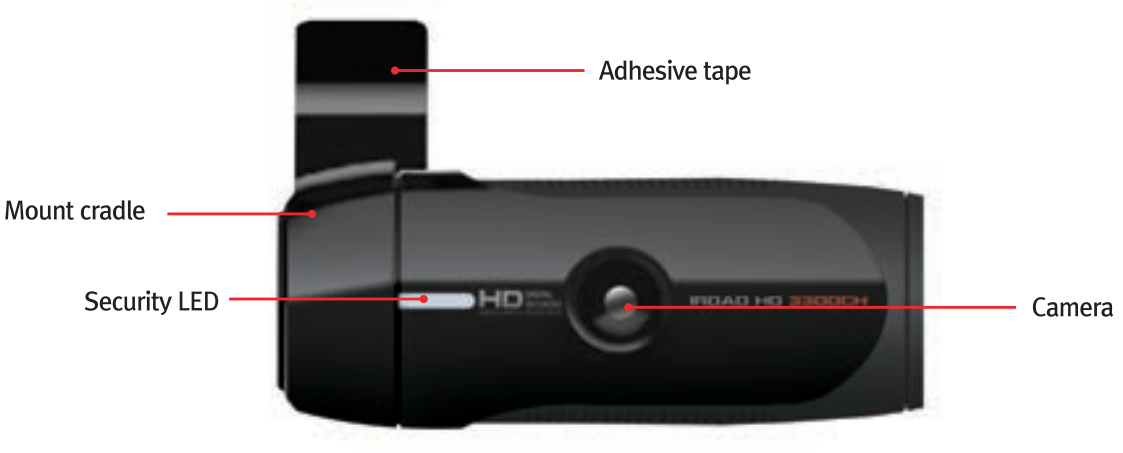
External GPS

Constant Power Cable

Video Cable

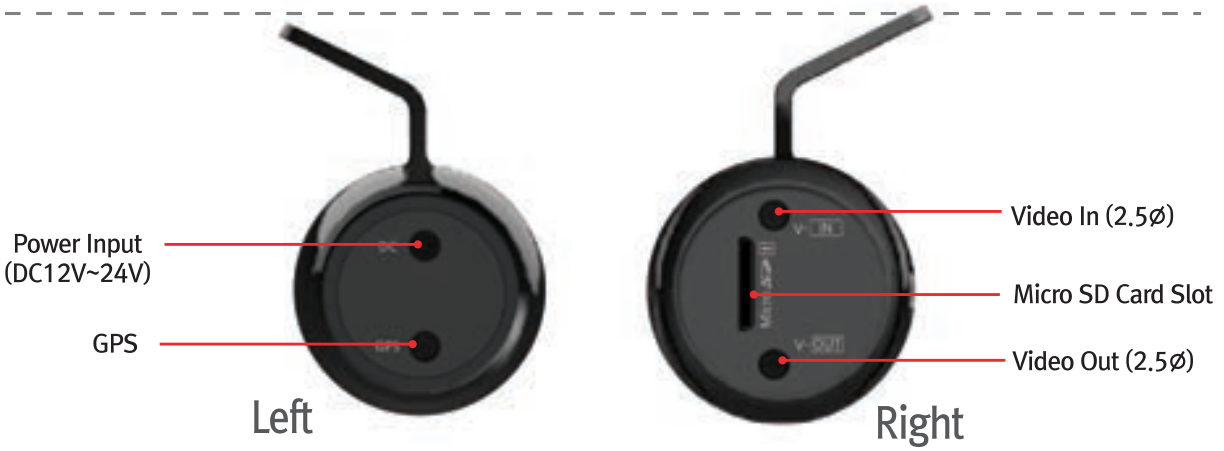
SD Card Reader

▶ The images of components can be different from the real and some of components can be changed by the situation of company.



Front

Back



Left

Right

8 Product Specification

Product Specification				
	Spec.	1CH	2CH	note
Exterior	Color	Black		
	Channel(Main/Sub)	Front	Rear	
	Lens Angle(Main/Sub)	130°	120°	1.5 Mega
	Level of Illumination	Above 0.5 LUX.		
	Video In/out	AV IN / OUT (2.5pie)	-	NTSC / PAL
	LED	Built-in High Intensity LED	-	
	Function	Quick button support (Event, Mute, Own Format, Parking Mode)		
Device Specification	Resolution(Main / Sub)	1280 * 720 (HD)	640 * 480 (VGA)	
	Video Format	MPEG4 (H.264)		
	Frame	30fps / 20 : 10 (2 : 1)		
	Memory	Micro SD		SDHC 2GB ~ 32GB
	Recording methods	Over Writing		
	Audio Recording	High Sensitive MIC built-in		Mute Support
	Voice Output	Speaker	-	-
	GPS	External Type	-	Location, time, speed support
	Time	Internal RTC	-	Automatic Synchronization when connecting with GPS
	G-Sensor	3 Axis Acceleration Sensor(X,Y,Z)	-	
	Operating Voltage	12 ~ 24V		
	Power Consumption	200mAh	60mAh	
	Operating Temp.	-20° ~ 80°		
	Storage Temp.	-25° ~ 85°		
	Battery	Lithium Battery	-	Built-in
	Recording Mode	Constant/ Event or Manual/ Parking/ Detection		
	Normal Recording	Minutely Recording		
	Impact Recording	10 Sec. before Collision ~ 20 Sec. after Collision		
	Motion Recording	10 Sec. before motion detection ~ 20 Sec. after motion detection		
Additional Function	PIP	PIP(AV out) Support		
	SD Format	Self-format function		
	Security	High-intensity Blue LED		Security
	PC - Viewer	Exclusive PC Viewer		Win xp, Vista, Win7
	F/W UPDATE	Firmware Update Support		

▶ The above product specification and function can be changed in order to improve the performance of product without prior notice.

Connect the micro SD card which saves the recorded video files with Smart Phone or PC.

• There are three different folders and the explanations for each folder follow as below.

EVENT (Impact)	INFINITE (Constant)	PARKING
20% of micro SD card space and overwrites at over-capacity	70% of micro SD card space and overwrites at over-capacity	10% of micro SD card and overwrites at over-capacity.

◎ Video file length in Micro SD card

60 seconds

60 seconds

60 seconds

60 seconds

◎ Total space of Micro SD card

MIN.90 minutes

MIN.180 minutes

MIN.360 minutes

MIN.520 minutes

▶ The value can be varied by the difference of the user's environment as the save system is variable save system.

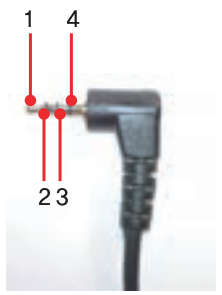
▶ 4~8G SD card, above CLASS 4, 16G SD card, above Class 6, 32G SD card, above 10

▶ The Constant Power Supply Unit can shorten life time of SD card (3~6 month) Change the old SD card when it is used up.

10 Product Description

A/V OUT

It is possible to watch the real-time recording video (V-OUT) by connecting with external devices (AV-IN)



- 1, 4 not in used
- 2 : Video, 3: Ground

The width of AV input port can be different by the different models of navigation.

▶ The AV Cable is an optional accessory; to purchase it, contact your sales representative or Hyundai Autocom.

Buttons

EVENT(EVENT / SD Format)

- Short press the Event button starts the EVENT recording
- Press the EVENT button about 5 seconds self-formats the SD card.

MODE (MUTE / PARKING)

- Short press the Mode button starts AUDIO MUTE
- Press the MODE button over 5 seconds, the PARKING mode is activated.

Voice Announcement and LED 11

Announcement Messages

1. Please have a safe driving today, too.
2. You can't use SD card. Please replace it with new one.
3. It starts the upgrade.
4. Upgrade has been completed. It's under rebooting.
5. It starts the initialization.

		Operation &function	Voice announcement	LED			Note
				Security (B)	❶ REC G	GPS (B)	
Power On		Power On		–	–	–	–
Device Booting			" Please have a safe driving today, too. "	●	●	●	System Check
Power Off		Power Off	Alert Sound	◌	◌	◌	Save Video and Power off
Recording Mode		Constant Recording	–	◌	◌	●	LED on/ off by GPS built-in
EVENT Button	Event Recording	Automatic or Short press Event button	Alert Sound	◌	◌	●	–
	SD card format	Long press Event button (4 Sec. or more)	"It starts the initialization of SD card."	●	◌	◌	Cross flickering between REC LED 〈–〉 GPS LED (Auto reboot after format)
MODE Button	MUTE	Short press Mode button	Sound	◌	◌	●	Set: GPS LED Flickering once Clear: GPS LED flickering twice GPS Reception is activated after flickering
	PARKING MODE (Motion)	Long press Mode button (2 Sec. or more)	Sound	◌	◌	○	-Auto parking mode is activated if the vehicle is not moved for ten minutes -Long Press Mode button or drive away vehicle
Security		Security	–	◌	◌	●	–
GPS		Power On	–	◌	◌	●	❷
SD card malfunction or the product malfunction		Alert	You can't use SD card. Please replace it with new one	◌	◌	◌	Audio-visual Alert (Sound, LED flickering)
Firmware Update		❸	–	Flickering in order			Power off the device can cause the device malfunction while updating.

❶ Recording LED : It shows the status of LED . ● Active: On ○ Non-active : Off ◌ Flickering

❷ GPS: The reception may not be good enough if the vehicle is at the area of non-reception area (basement garage, tunnel and highway) or under the bad weather or the electromagnetic interference from other electronic devices inside vehicle or different types of vehicle.

❸ F/W update: It is possible to upgrade firmware with copying it to the SD card and inserting the SD Card to the product

▶ The function related to the product operation can be changed without prior notice in order to improve the performance of the product.

12 How to install

How to install the Front Camera

1. Insert the enclosed memory card into the product as shown in the picture above.

2. Remove the protective plastic film from the sticky tape on the mount.

3. Use soft cloth to wipe out the spot where the device is attached on the front window (Adjust the angle by the height of vehicle)

4. Plug the cigarette power cable into the product

5. Plug the cigarette power cable into the cigarette power outlet. Check if the device operates.

How to install the Rear Camera

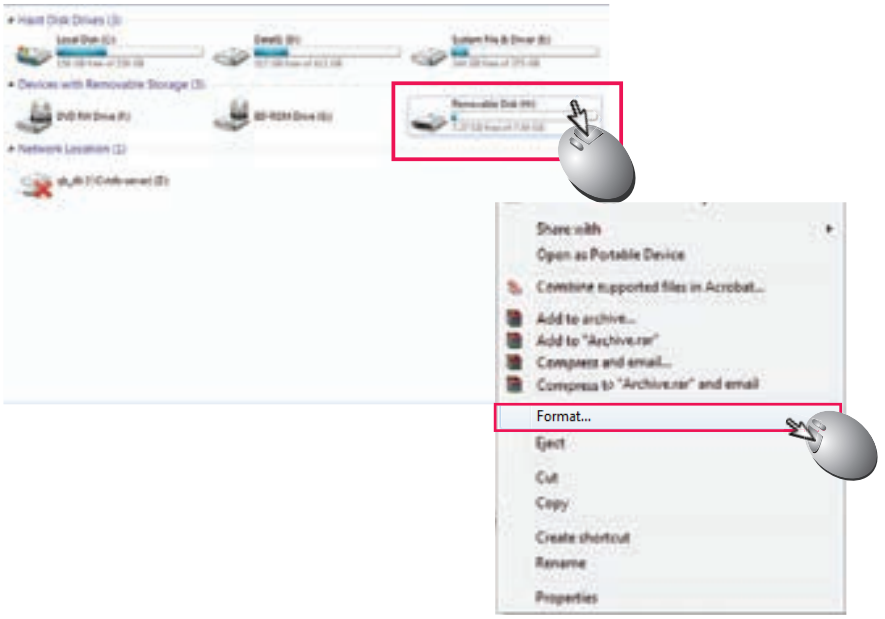
- Install the rear camera on the rear window as the same way of the front camera, Connect the rear camera into V-IN input of the front camera.

is required that you connect the rear camera before
After connecting the rear camera to the V-IN jack on the front body, you should connect it to the power

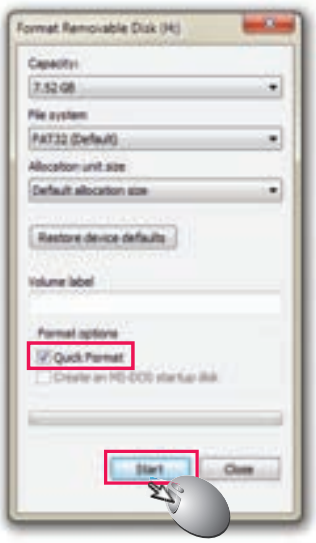
14 How to format SD card

1. Double – click “My computer”

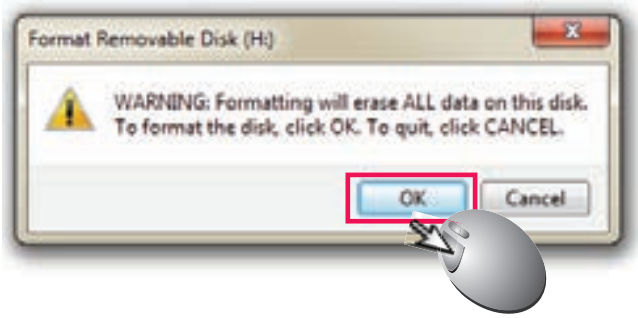
2. Click the right button on the mouse at “Removable Media Device”
   Click the left button on the mouse at “Format” of menu bar when the menu bar pops up.



3. Format Window pops up as shown in the picture below. Select “Quick format” and Click the left button of your mouse at “Start” button.

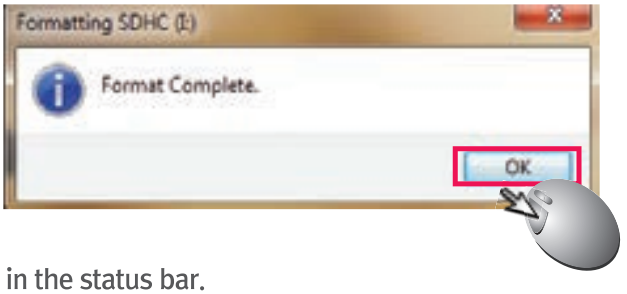


4. Click “Confirm” button when Warning Window pops up.

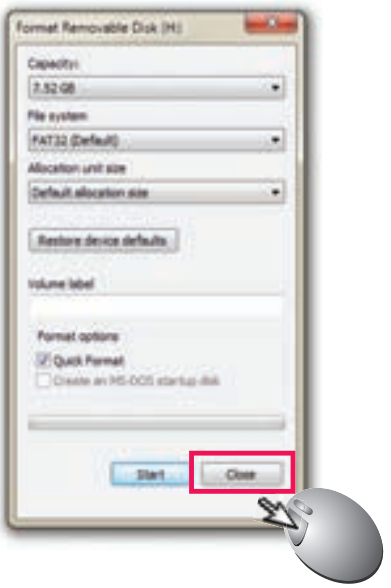

Format Removable Disk (H:)
WARNING: Formatting will erase ALL data on this disk.
To format the disk, click OK. To quit, click CANCEL.
OK
Cancel

5. Do not click the “Cancel” button but wait until format is completed when green bar is in progress.

6. Click “OK” button when “Format complete” comes up.



7. Click “Close” button in the status bar.



8. Format is completed

16 Exclusive PC Viewer

Play Function

(1) Select folder: Select the removable disk or folders that the recorded videos are saved in.

(2) Map information Screen On/Off: It is possible to mark or drag the Map information screen.

(3) Screen capture: It is possible to capture the video image (Open the folder after capturing)

(4) Print: The Preview Window pops up when choosing Print (Print after checking)

(5) Full screen: Full Screen, [ESC] Full screen termination, [Space Bar] Pause/Play,
[Enter] Camera transition

(6) Configuration: It is possible to set the recording configuration of the product

(7) Program information: Display of program information

(8) Minimization: It is possible to minimize the window of PC viewer

(9) Program termination: Termination of the viewer application program

▶ (2)~(5) are activated only when playing the video.

Play Function

Previous File / Go to the previous bookmark / Go to 5 seconds back / Play or Pause / Go to 5 seconds forward / Go to next bookmark / Next File

(1) Play Speed Change: [–] Slow/ [1X] Normal/ [+] Fast play

(2) Play Searching Bar: Play Section Marking

(3) Bookmark: It is possible to set or delete a bookmark

(4) Play Control Panel: –Previous files: Play the previous file from the recording file list

- Go to previous bookmark, if there are previous bookmarks.
- Go to 5 seconds back: Go to 5 seconds back from current location
- Play/Pause: Video play and pause - using space bar is the same function
- Go to 5 seconds forward: Go to 5 seconds forward from current location
- Go to next bookmark: Go to next bookmark if there are next bookmarks.
- Next File: Play the next file from the recording list.

(5) Playing time/Total time: Current play time/ Total play time.

(6) File name: Name of Video file

(7) Brightness Adjustment: It is possible to adjust the level of brightness (–dark 〈–〉 bright+)

(8)Volume Adjustment: It is possible to adjust the level of recording volume (Click speaker button to Mute)

18 Exclusive PC Viewer

Play Function

(1) Recording file Filter: It is possible to show or hide filtering the constant or event files

(2) List up recording files: Ascending order or Descending order

(3) Recording list: List up recording files

(4) Memo: Click the right button on the mouse and it is possible to make a note or alter in any video files,
Memo function can be activated only in play mode.

(5) Speedometer: Display of drive speed

(6) Total mileage and average: Display of total mileage,
Maximum speed: Display of maximum drive speed

(7) Speed Change Graph: Green, Impact Sensor Change Graph: Blue, Red

(8) Full screen play function: Press the Enter key in order to play videos in the full screen,
([ESC] Full screen termination, [Space Bar] Pause, [Enter] Camera Change)

(9) Reverse the video image: It is possible to reverse video image left and right in play mode.
(It is possible to reverse “camera 1” and “camera 2” clicking title bar or pressing “keyboard 1” or “keyboard 2”)
In Reverse mode, title is changed in the title bar to “◑Camera 1, 2”)

Map Button

▶ Map button should appear when the Internet is available.

[Mini-map screen]

[Large map screen]

(1) Map Information Screen: It displays Mini Map Screen

(2) Enlargement: [+]Map Screen enlargement

Reduction: [–]Map Screen reduction

(3) Map Conversion: Mini Map/Large Map

(4) Map scroll On/Off

(5) Map and satellite view conversion

(6) Daum map and Google map conversion

(7) Large Map window Lock: It is possible to fix or move the large map window.

(8) Conversion to small map

(9) Conversion to small map

20 Exclusive PC Viewer

Configuration Set-up

(1) Initialization of configuration
(2) Path to the configuration file: Select a folder to save the configuration
(3) Drive impact sensor: G sensor sensitivity setting in Driving mode.
(4) Parking Impact Sensor and Motion Sensor: G sensor sensitivity setting in Parking mode.
(5) Audio Recording: Microphone Select in order to record Audio
(6) Speaker Volume: Voice Announcement volume select
(7) Security LED: Security LED on and off
(8) LED flickering interval: Flickering Interval setting
(9) LED Operation: Security LED color setting
(10) Parking mode conversion time: Interval setting between Constant mode and Parking mode.
(11) System time: Black-box time initialization
(12) Initialization of Black-box: Black-box initialization On/off setting.
(13) Version confirmation: Black-box version information.
(Version information will be updated as the firmware version updated)